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<u>PATENT</u>
Attorney Docket No.: 018547-030130US
Client Ref. No.: 3038.1B
</div>

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Lemieux et al.

Application No.: Unassigned

Filed: January 9, 2002

For: BRASSICA POLYMORPHISMS

Examiner:	E. Campbell
Art Unit:	1656

<u>PRELIMINARY AMENDMENT UNDER</u>
<u>37 C.F.R. § 1.821-1.825</u>

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

   In order to comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures, Applicants enclose a paper copy of the Sequence Listing filed in Application No. 08/813,507, filed March 7, 1997. In accordance with 37 C.F.R. § 1.821(e), please use the computer-readable form filed in Application No. 08/813,507 as the computer-readable form for the instant application. The information in the paper copy of the Substitute Sequence Listing enclosed herewith is identical to that which is in the computer readable form, as required under 37 C.F.R. § 1.821(f). It is understood that the Patent and Trademark Office will make the necessary changes in application number and filing date for the computer-readable form that will be used for the instant application.

IN THE SPECIFICATION:

Please replace the paragraph beginning on page 4, line 9, with the following:

Fig. 1 shows probe array tiles (SEQ ID NOS:3-29) for two allelic forms of the Brassica 18A2 polymorphism (SEQ ID NOS:1 and 2).

Please replace Table 1, beginning on page 8, line 10, with the following:

Marker Name	Sequence	SEQ ID NO
1-85/5B5/86-1	AGCAAGCTTACATGCGTGGA[GT/AA]GAGAGTCCTCGAGATCAACC	30
2-85/5B12/N3-1	CCTTGATCTCTCAAGTAATC[A/G]TCTCACCGGAAGATCCCTGA	31
3-85/5C3/86-2	ACCATCCATTAAACTGTATC[A/G]TCGCAATCTAACCAAAAGTT	32
4-85/5E1/86-1	TAAAGCAAAGAGAGTCTTAC[C/A]GTCTGCTGCATGATATACCC	33
5-85/5E1/86-2	CTACTGATAGTGAACCACCC[A/C]ATCCCCAAATTTAAAGCAAA	34
6-85/6A11/86	ATCCTATTGGTAGTAACACA[G/A]ATTGAGTTAATGTTGCAGGG	35
7-N1/6A11/N2	AGGCAAAGCGGGTAGTTGCAA[G/A]ACTGCTTCTCACGAGGTAAT	36
8-N1/6A9/N2-1	CCAGCTTCAATGTCTGCATG[C/A]TTGTGTCGATGCCAAAGTTC	37
9-N1/6A9/N2-2	AAAGTTCATTACGATGATCT[A/G]ACCCTGCAGTCATCCATGGA	38
10-85/6A12/86	CTTCCCCCCCTCAATACCTC[T/G]TTCAAAAGTGAAAAGTGCAG	39
11-N1/6D1/N2-1	ATTTTGTTTTGTTTCTTGTC[G/C]GGTCAGGTCAGAACAAAGTT	40
12-N1/6H5/N2	AAACCAGAGCCACCTCCTTA[C/]CCACCTCATCGTTTCCTTTC	41
13-86/6F11/N2-2	GATTTCGACCGCAGTCTCAC[G/T]GAGGATGAGTATATCGCTTT	42
14-N1/6F11/N2	TAGGACAGGCAAACAATCTA[C/A]GCGGTCAAAATCCGATTTCG	43
16-N1/8B5/N2	ACTCAAAAAACGATACCTC[G/C]GCCGTCTCTCGCCGTCTCGC	44
17-N1/8D4/N2-1	CAGGAGACAGTTACAGTCCC[/A]CAGAGTCGCAAGGATCTCGAA	45
18-85/8D4/86-2	CTGATCTTGAAGGAGAGACC[A/G]CCACAAGGTTCCATCCTATG	46
19-85/8H11/86	AGTGCgAGGCTCAGTTGGAT[G/T]ATTAGGGTGTCAGTAAATCA	47
20-85/10B8/86	NAGGTCCATGATGATGACAA[T/A]AAAGGTATTCCACATGTCAA	48
21-N2/10B8/N3-2	ACATCCAACTTTCTCCAGT[T/C]CTTTATTCTATCCTGATTTG	49
21-N2/10B8/N3-2	ACATCCAACTTTTCTCCAGT[T/C]CTTTATTCTATCCTGATTTG	50
22-N2/10B8/N3-1	AAGGTATTCCATTGGTATAC[A/C]TCCAACTTTTCTCCAGTTCT	51

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23-85/10B9/86	GACCTTCTTGGGAAAGAAAG[T/C]TGTAACCGCGTCGAGATTCG	52
24-10C8/N2	ATAGAAACCGCCGATGCTCA[A]GGACACGCCACCGTCTTCGT	53
25-10C8/N2	CACTTTCTTCGTGGCTAAAT[T]CTTCGGCCGAGCCGGTCTCA	54
26-10D2/N1	GTTATCATCAGTACCGGTAT[T]AACCCCAAGGCTAATTCTTA	55
27-85/10D2	TTGGGTATCTACGGACTGAT[C]ATCGCTGTTATCATCAGTAC	56
28-N1/10E12/N2-1	GGAATTCAATACTCGCCAAC[G/T]TCTTCATTGCTGTCGTCGGC	57
29-N1/10E12/N2-2	TCCTTACGCCTTCAAGCGCA[C/G]CGGCTGGCTCATGGGTGTCC	58
30-N1/10F4/N2	TGTATCTATGCGGTGGCTGC[G/C]GTCTCCGTTCGCGCCAGTAC	59
31-10F4/N2	GCGCCAGTACCGCCGGTTAC[A]ATCTcACTGCCTTCACGTCC	60
32-85/10F4/N2	GCGCCAGTACCGCCGGTTAC[G/A]ATCTTAATGCCTTCACGTTC	61
33-85/10F9/N1-2	AACTTGGAATTCCACAACTT[G/C]AGAAACTTCGATGTGGTGCC	62
34-85/10F9/86	CGGTACTGCGAAAGCTGGAG[C/G]ATCAACTTGGAATTCCACAA	63
35-86/10F12	AAAAGTGCTATTGTTCAGGT[G]GATGCTGCTCCGTTCAAGCA	64
36-85/10H6/86	GTCAAAAGCCACGGATTCAA[G/A]AACGTGCTCTTCTTGCGCCT	65
38-85/10F12/86	AAACCAGGGTCCTTGATGTG[T/]GTCTACAACGCTTCCAACAA	66
39-85/11B7/86	AANACCCTGAGCTCATGCCT[C/T]TGACCCATGTTCTTGCCACC	67
40-85/11C4/86	TTTGGGACCGTTGGAGTTGC[A/G]TCTGCGGGCTATGACGGTGGA	68
41-85/11D4/86-2	AATCTTTGCCATTGCTGTCA[A/G]TATCTTCGTCAGCTTCAGCT	69
43-N2/11D11/N3	GACAACGCTGGTGGTATTGC[C/T]GAAATGGCTGGAATGAGCCA	70
44-86/11D11/N3	GCTGCTCTAGGGATGCTCAG[C/T]ACCATCGCCACCGGTTTGGC	71
45-85/11D11/86	ATGCTCAGCACCATCGCCAC[T/C]GGTTTgGCGATTGATGCTTA	72
46-N2/11E3/N8a	GAGAAAGTGCTTGTTGTGGAGAT[C/T]TACAaGTCCATACTGATGGC	73
47-86/11E3/N2a	AATGCTTGTGGAGATtTACA[G/A]GTCCATACTGATGGCGCAGG	74

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48-86/11E3/N2b	AATGCTTGTGTGGAGATcTACA[G/A]GTCCATACTGATGGCGCAGG	75
49-85/11F12/86	AATGATTGGTTTGAGAAGCA[T/A]ACAGCTGGTACGCTTGATAT	76
50-85/11F7/86	GATAGGGCGAAGAGAGGGAA[G/A]AGTCCTGAGAGAGGAAAGAGAT	77
51-85/11H2/86-2	CTCTCTCTCCACAAAGACAC[A/C]GCTTTCTCCATGACCTTCGG	78
52-85/11H5/86-2	TCTCTGACGTCATGAAAGCT[C/A]ATGGCAAAATTGCTGATGGA	79
53-85/11H6/86-1a	GTTATCGATCGCGTGGTCCG[T/C]GAAACCCAAAATaCACCTTT	80
54-85/11H6/86-1b	GTTATCGATCGCGTGGTCCG[T/C]GAAACCCAAAATtCACCTTT	81
55-85/12B6/N3	CGTCAGCCTTCTTCCGCCGC[A/C]GTCGTCCTCCGCAACCGTGC	82
56-86/12B6/85a	TGTCTCTTCCGTCAGCCTTC[C/T]TCCGCCGCAGTCGTCCTCCG	83
57-86/12B6/85b	TGTCTCTTCCGTCAGCCTTC[C/T]TCCGCCGCCGTCGTCCTCCG	84
58-86/12B11/85	TCAGGTTTACCTCTATATAT[T/]ATATTTCATGGTATGAAGGT	85
59-n1/12B11/N2-2	TATCCTGCAAATTGACATTT[T/C]CCTTCAGGTTCTAGAAGCTG	86
60-85/12C2/86	CGAGAACAGAAGAGAGAAGAGA[C/]TGGAACACGTCGGACAGTAC	87
62-12C11/N2	ACGGGTCCTAGCGCCATGGC[T]ATTTTCCTCACCGTTTCTGG	88
63-N1/12D10	TTGGGCTTTCGGTGGTATGA[T]CTTCGTCCTCGTCGTATTGCA	89
65-85/12F4/86-1	TCCTTGATTCCTTAATAATC[A/T]TTGGCTGGGGGTCTTTCTAA	90
66-12G5/N1	GCTTGAATAACGATGTCTAC[T]CTGCCTCGGCGTACGGCGGA	91
67-85/12G8	CTAAAAAGATCGACGAGTGT[C]CCTTACTACGCTCCATCTAT	92
68-12G9/N1-1	AGGTGGGTTTAGCGTGGCAT[C]CGATCCATTGGATGGATCCA	93
69-85/12G9/	NGTGGGTTTACCGTATCATT[T]GATCCATTGGATGGATCGAG	94
70-12B11/N2-1	GCGGATCCTATATTGGGTCT[T]GATGGATTGTTTCTATCCCG	95

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71 -/12B11/N2-2	TATCCTGCAAATTGACATTT [C] CCTTCAGGTTCTAGAAGCTG	96
72 -N1/12E10	TACCACGGTCGTACTGGTCG [A] TGTCTGGAACGTCACCAAGC	97
73 -N1/13A3/N2a	CTGTCTCAgTTTGTTGGATC [C/G] AAATCgAATCgAAAGCGTAC	98
74 -N1/13A3/N2b	CTGTCTCAgTTTGTTGGATC [C/G] AAATCaAATCgAAAGCGTAC	99
75 -13E8/N2	ACACTGTTGGAGGACGTGAA [G] AAGATATTCAAGACAACATC	100
76 -N1/13F6/N2-2	TCTTTCGTATCTTGCTGAGT [C/T] GTTACGCCTGTCAACACCCG	101
77 -13F8/N2-1	GGAACCCTAGGGAGCCCACA [G] CTCCTTATGCTAAGCGGCGT	102
78 -13F8/N2	GATCATAGTATCCGCCGGAA [C] CCTAGGGAGCCCACAGCTCC	103
79 -85/14B5/86	TTCGGCGGGTCGATCCGGGC [A/G] GAAGACATTGTCAGGTGANN	104
80 -N1/14C2/N2	GCACCAACATTGTAAACCTA [T/G] AGCTTCTTCCTCAGCCACCT	105
81 -85/14C2/86-1	GCTGCCACATAGTGAACCTA [T/A] AGCTTCTTCCTCAGCCACCT	106
82 -N2/14C2/85-2	GCACCAACATTGTGAACCTA [G/A] AGCTTCTTCCTCAGCCACCT	107
83 -85/14C2/86-2	AGTACATAGCTATTGACTAA [C/G] TTAAGTTCCTTGTATTGTTG	108
84 -N2/14C2/85-1	CCTCTATCCGCCATGGTTGC [A/T] CCAACATTGTGAACCTAGAG	109
85 -85/14E2/86-2	TTGACCCTCGGCAAGCCACC [G/T] GTCAAGCCATGCTGCAGCCT	110
86 -85/14E2/86-1	AGGCTGCCCCTCTCCCAATTC [A/C] AAAGCCAACTCCTAAACCAA	111
87 -85/14E8/86	AAACATGAAAGGCCTGATA [/G] TCACCGTCAAGCTCACCGTC	112
88 -85/14E12/86	CAACCTGAAAAATTGTTTTA [C/A] CAACGGCCCCGCTTTCTCCA	113
89 -14H10/86	AAGGCCAACAACGACATTAC [C] TCCATCGTTAGCAACGGAGG	114
90 -85/14H10/86	TCACCGGCTTGAAGTCTTCC [G/T] CTGCATTCCCAGTCACCCGC	115
91 -85/15A6/86	ACTCAGCTTTCTTATGCCTC [G/] ACTTGGCACACACGAATCCA	116

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92-85/15C4/86	TGCGGCTAACATCTCTGGTG[G/T]TCACCTTAACCCAGCCGTAN	117
93-85/15E5/86-1	CGAGGATCACTTCTCTCTGT[G/T]CAAGAAGAAGTTCGGCAAGG	118
94-N1/15E5/N2-1	CTGTtCAAGAAGAAGTTCGG[C/T]AAGGTCTACGCTTCCCGCGA	119
95-N1/15E5/N2-2	CCCTCTGCTCGTCACGGCGT[T/A]ACGCAGTTCTCGGATCTGAC	120
96-86/15E5/N2	CCCGCGAGGAGCACGACTAC[A/T]GATTCTCCGTTTTCAAATCC	121
97-15E9/86	TCCACTCGCCGGGAAGAAAC[T]CGACAAACCGTTGTCTACTT	122
98-N2/15E9	ATGGCTCGCGACGGGTCTCC[G]GTAAACCTCGGAGAGCAGAT	123
99-N2/15E9/86	GCCGACTCTCGAAGCTTCTT[A/]ACTCCACTCGCCGGGAAGAA	124
100-85/15E9/86-1	GAATCTAGGAGAGCAGATCT[T/G]CCTCTCTATCTTCAATGTTC	125
101-85/15E9/86-2	TCCACTCGCCGGGAAGAAAC[C/T]CGACAAACCGTTGTCTACAT	126
102-N1/15E9/N2-1	GTCATGAAGATATTCACTAC[A/G]CCGACTCTCGAAGCTTCTTA	127
103-85/15F1/86	GCAGGTAAAATTCTACAGAC[C/A]TTCCCTTTTCATTGTAGTTA	128
105-85/15F10/86	GTGCCCTAAAGATACCCTCA[A/G]GCTTGGTGTCTGCGCTAATG	129
106-N2/15G1	TTCTTCCCACAGTGAAACT[T]GCTAACTTCCTTCCAAAGTA	130
107-N1/15H7/N2	TATGTATCAGGACAATGTGT[GA/TT]GTGACTGTGGTTGCATCCAT	131
108-N1/16A1/N2-1	GCTAAGCTACGCAACTGCCA[C/T]CAATCAGGGCAAGCTAAAGG	132
109-85/16A5/86	TATACACTCTTTAAAAGCGT[G/C]TGTGTGTACCCATCTCTCTT	133
110-N1/16B6/N2	ATGGCTGCGTATTGGCTGTC[C/T]AAGGCTGGATCTTGGTCCCA	134
111-85/16B6/N1	GGATCCATCTCAACTATGGT[A/C]GTATTATCGTTGAGGCTAGG	135
112-85/16B7/86	GTATGTGATTCGGAAGAGAA[T/]CAAACTAAGTGCCGAGAAAG	136
113-N1/16D6/N2	GCTAAGGTAGTTGGAGGAGC[CAA/GTG]CCACAGCCACGCGACTAAGG	137
114-85/16D10/86	CTCAACGTAGCAAGTAATAA[T/G]ATACTGTCTATTTATGGTTA	138

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115-N1/16E9/N2	AGACTTTCCCCATTCTCTTC [T/A] CCATCCACCGTCGAAACCCA	139
116-85/16H3/86-1	ACTTCGAAACTGTAAACCTA [A/T] ACTTTAAGAGTTTAGAGCTA	140
117-85/16H3/86-2	CACCATCGGAGAAAGAGGTA [C/T] TTCGAAACTGTAAACCTAAA	141
118-85/17A5/86	CTAAGGCGTCTCCTGAAGAA [A/G] TACAGAGAGTCGAAGAAGAT	142
119-85/17C7/86	CCGCGGACGACGCTTTCTTC [C/A] TCTGCTCCACCGCGAGCGCC	143
120-85/17F7/86	GAGGAGTAGTCTCCATGGCC [G/] AAGAAGAGCGTCGGAGACCTG	144
121-85/17G12/86	GAAGTTAGGGCTTCTAAGAT [C/T] AAGTTCGGCAAGGCTTTAAC	145
122-85/18A2/86	TCAAAACTAATATTTCTTTT [G/C] TTGATTGGTAATAAACAGGT	146
123-85/18A11/86	TTCCAGTGAAAAGGCATTGT [T/G] CTCCAAAATCTCGCTCTGCG	147
124-85/18F5/86	AAGCAGCTCTGACTTGAATG [C/A] GAGAGGTTAATCAGACTGTG	148
125-85/18H10/86-3	TAGATTGAAGCAATCAAGAA [G/A] ATCTCAGACTTCATCACCCA	149
126-85/19B3/86	GCATCCAACTCCAAGGATGA [/C] CCTGCCAAGGTGCTGCTAACT	150
127-85/19C8/86	GAGCTCAGGGATGGTGGATC [A/T] GACTACCTTGGAAAGGGTGT	151
128-N1/19F4/N2	TGGGGTTAGTCGAAATAGGT [A/T] AAATGCTTTGAGTATGTGTA	152
129-N1/19H1/N2	TACGCGCAGCACGGACTTGC [G/A] ACGCAAGCAATCGAGCTTTT	153
130-85/20B4/86-1	GAAGCCCATGGTACGGAGCG [G/A] GAGAGAGTCAAGTACTTGGG	154
131-N1/20B12/N2	AACGGGTCACTGCTAAATCA [T/A] AAGGATCACAAGGCTGGGAC	155
132-85/20C12/86	CTAGCCTACTTTGGGAAAAG [/T] TTCGTTATTGTTTTGTGTGG	156
133-85/20D2/86	GACTTCAAGGACTTCGCCGG [A/C] AAATGCTCCGACGCTGTCAA	157
134-85/20D3/86-2	GAGGAGGGCTACATGCAGCT [G/A] AAGAGGCTGAGGGGCTAAA	158
135-85/20D6/86-4	GATGTTCAACCTATGAAGAA [G/C] AAACACCGAGGACCAACGAG	159
136-85/20D6/86-5	CCATTAGTGAGGGAGCATGT [T/A] CCTGTCACATTTGATGATTG	160

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137-85/20D6/86-8	AAACACATCGCCAAAGATCC[CG/AA]ACACTCGAGAAAGAGTGGAG	161
138-N1/20D8/N2	CTCATAGGCGATCTGGAGTA[T/G]GCAAATCGAATCTCCTCTCC	162
139-N1/20E1/N2	TGCACGCCTCACTTGTTCCT[T/A]CCAATCTGACATCAAGGATT	163
140-N1/20F1/N2-1	NGTGTTTTTGAGGTGAAAGC[A/T]ACAAATGGAGATACCTTTTT	164
141-N1/BoC-a2/N3-2	CCCGAGCCATTAGGACAAGA[T/C]GACTTGCCGTTTGACCAAAC	165
142-N1/BOC-A2/N3-1	CCCATCTCATCCTTTCTTGA[A/G]CCGTTGAATCAAGCTCCTGG	166
143-N1/BoC-a2/N3-3	TACATTCTCATTGGTTGGTT[C/A]TTGGGAAATAAAGTACCAAC	167
144-86/SC3	GCACGCGCTAGAGTTGTTGC[C]AGAAGGAATGAACAATCTGA	168
145-N3/SC3/N4-1	CTTGAGACCTATAGTCCTGT[A/T]GTTCGGTCCGCCACAGTTCG	169
146-N3/SC3/N5-1	CACAGTTCGTACAGTTCTTC[A/C]CATTGCCACTGTTATGCACT	170
147-N1/SC3/N3-1	GAAGGCGTCCACTATCTTGA[A/G]ACCTATAGTCCTGTTGTTCG	171
148-86/SC3/N4-1	TCCCGGAAATCTTGCTGAAA[A/C]CGTTTACCTGCCGACAACCAG	172
149-B11/N5-1	ATGTCTTCAAAGTGCTCTGT[T]GCAACGCACGTCCGAACAAG	173

Please insert the accompanying paper copy of the sequence listing, page numbers 1-37, before the claims.

REMARKS

The information contained in the computer readable form of Application No. 08/813,507 was prepared through the use of the software program "PatentIn" and was identical to that of the paper copy. This amendment contains no new matter.

Attached hereto is a marked-up version of the changes made to the claims by the amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

Joe Liebeschuetz
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PA 3193060 v1

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

The paragraph beginning on page 4, line 9 has been amended as follows:

Fig. 1 shows probe array tiles (SEQ ID NOS:3-29) for two allelic forms of the [Brassira] Brassica 18A2 polymorphism (SEQ ID NOS:1 and 2).

Table 1 beginning on page 8, line 10 has been amended as follows:

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TABLE 1

Marker Name	Sequence	SEQ ID NO
1-85/5B5/86-1	AGCAAGCTTACATGCGTGGA[GT/AA]GAGAGTCCTCGAGATCAACC	30
2-85/5B12/N3-1	CCTTGATCTCTCAAGTAATC[A/G]TCTCACCGGAAGATCCCTGA	31
3-85/5C3/86-2	ACCATCCATTAAACTGTATC[A/G]TCGCAATCTAACCAAAAGTT	32
4-85/5E1/86-1	TAAAGCAAAGAGAGTCTTAC[C/A]GTCTGCTGCATGATATACCC	33
5-85/5E1/86-2	CTACTGATAGTGAACCACCC[A/C]ATCCCCAAATTAAAGCAAA	34
6-85/6A11/86	ATCCTATTGGTAGTAACACA[G/A]ATTGAGTTAATGTTGCAGGG	35
7-N1/6A11/N2	AGGCAAAGCGGTAGTTGCAA[G/A]ACTGCTTCTCACGAGGTAAT	36
8-N1/6A9/N2-1	CCAGCTTCAATGTCTGCATG[C/A]TTGTGTCGATGCCAAAGTTC	37
9-N1/6A9/N2-2	AAAGTTCATTACGATGATCT[A/G]ACCCTGCAGTCATCCATGGA	38
10-85/6A12/86	CTTCCCCCCTCAATACCTC[T/G]TTCAAAAGTGAAAAGTGCAG	39
11-N1/6D1/N2-1	ATTTTGTTTGTTTCTTGTC[G/C]GGTCAGGTCAGAACAAAGTT	40
12-N1/6H5/N2	AAACCAGAGCCACCTCCTTA[C/]CCACCTCATCGTTCCTTTC	41
13-86/6F11/N2-2	GATTTCGACCGCAGTCTCAC[G/T]GAGGATGAGTATATCGCTTT	42
14-N1/6F11/N2	TAGGACAGGCAAACAATCTA[C/A]GCGGTCAAAATCCGATTTCG	43
16-N1/8B5/N2	ACTCAAAAAACGATACCTC[G/C]GCCGTCTCTCGCCGTCTCGC	44
17-N1/8D4/N2-1	CAGGAGACAGTTACAGTCCC[/A]CAGAGTCGCAAGGATCTCGAA	45
18-85/8D4/86-2	CTGATCTTGAAGGAGAGACC[A/G]CCACAAGGTTCCATCCTATG	46
19-85/8H11/86	AGTGCgAGGCTCAGTTGGAT[G/T]ATTAGGGTGTCAGTAAATCA	47
20-85/10B8/86	NAGGTCCATGATGATGACAA[T/A]AAAGGTATTCCACATGTCAA	48
21-N2/10B8/N3-2	ACATCCAACTTTTCTCCAGT[T/C]CTTTATTCTATCCTGATTTG	49

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21-N2/10B8/N3-2	ACATCCAACTTTCTCCAGT[T/C]CTTTATTCTATCCTGATTTG	50
22-N2/10B8/N3-1	AAGGTATTCCATTGGTATAC[A/C]TCCAACTTTTCTCCAGTTCT	51
23-85/10B9/86	GACCTTCTTGGGAAAGAAAG[T/C]TGTAACCGCGTCGAGATTCG	52
24-10C8/N2	ATAGAAACCGCCGATGCTCA[A]GGACACGCCACCGTCTTCGT	53
25-10C8/N2	CACTTTCTTCGTGGCTAAAT[T]CTTCGGCCGAGCCGGTCTCA	54
26-10D2/N1	GTTATCATCAGTACCGGTAT[T]AACCCCAAGGCTAATTCTTA	55
27-85/10D2	TTGGGTATCTACGGACTGAT[C]ATCGCTGTTATCATCAGTAC	56
28-N1/10E12/N2-1	GGAATTCAATACTCGCCAAC[G/T]TCTTCATTGCTGTCGTCGGC	57
29-N1/10E12/N2-2	TCCTTACGCCTTCAAGCGCA[C/G]CGGCTGGCTCATGGGTGTCC	58
30-N1/10F4/N2	TGTATCTATGCGGTGGCTGC[G/C]GTCTCCGTTCGCGCCAGTAC	59
31-10F4/N2	GCGCCAGTACCGCCGGTTAC[A]ATCTcACTGCCTTCACGTCC	60
32-85/10F4/N2	GCGCCAGTACCGCCGGTTAC[G/A]ATCTTAATGCCTTCACGTTC	61
33-85/10F9/N1-2	AACTTGGAATTCCACAACTT[G/C]AGAAACTTCGATGTGGTGCC	62
34-85/10F9/86	CGGTACTGCGAAAGCTGGAG[C/G]ATCAACTTGGAATTCCACAA	63
35-86/10F12	AAAAGTGCTATTGTTCAGGT[G]GATGCTGCTCCGTTCAAGCA	64
36-85/10H6/86	GTCAAAAGCCACGGATTCAA[G/A]AACGTGCTCTTCTTGCGCCT	65
38-85/10F12/86	AAACCAGGGTCCTTGATGTG[T/]GTCTACAACGCTTCCAACAA	66
39-85/11B7/86	AANACCCTGAGCTCATGCCT[C/T]TGACCCATGTTCTTGCCACC	67
40-85/11C4/86	TTTGGGACCGTTGGAGTTGC[A/G]TCTGCGGGCTATGACGGTGGA	68
41-85/11D4/86-2	AATCTTTGCCATTGCTGTCA[A/G]TATCTTCGTCAGCTTCAGCT	69
43-N2/11D11/N3	GACAACGCTGGTGGTATTGC[C/T]GAAATGGCTGGAATGAGCCA	70
44-86/11D11/N3	GCTGCTCTAGGGATGCTCAG[C/T]ACCATCGCCACCGGTTTGGC	71

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45-85/11D11/86	ATGCTCAGCACCATCGCCAC[T/C]GGTTTggGCGATTGATGCTTA	72
46-N2/11E3/N8a	GAGAAAGTGCTTGTGGAGAT[C/T]TACAaGTCCATACTGATGGC	73
47-86/11E3/N2a	AATGCTTGTGGAGATtTACA[G/A]GTCCATACTGATGGCGCAGG	74
48-86/11E3/N2b	AATGCTTGTGGAGATCTACA[G/A]GTCCATACTGATGGCGCAGG	75
49-85/11F12/86	AATGATTGGTTTGAGAAGCA[T/A]ACAGCTGGTACGCTTGATAT	76
50-85/11F7/86	GATAGGGCGAAGAGAGGGAA[G/A]AGTCCTGAGAGAGGAAAGAGAT	77
51-85/11H2/86-2	CTCTCTCCACAAAGACAC[A/C]GCTTTCTCCATGACCTTCGG	78
52-85/11H5/86-2	TCTCTGACGTCATGAAAGCT[C/A]ATGGCAAAAATTGCTGATGGA	79
53-85/11H6/86-1a	GTTATCGATCGCGTGGTCCG[T/C]GAAACCCAAAATaCACCTTT	80
54-85/11H6/86-1b	GTTATCGATCGCGTGGTCCG[T/C]GAAACCCAAAATtCACCTTT	81
55-85/12B6/N3	CGTCAGCCTTCTTCCGCCGC[A/C]GTCGTCCTCCGCAACCGTGC	82
56-86/12B6/85a	TGTCTCTTCCGTCAGCCTTC[C/T]TCCGCCGCAGTCGTCCTCCG	83
57-86/12B6/85b	TGTCTCTTCCGTCAGCCTTC[C/T]TCCGCCGCCGTCGTCCTCCG	84
58-86/12B11/85	TCAGGTTTACCTCTATATAT[T/]ATATTTCATGGTATGAAGGT	85
59-n1/12B11/N2-2	TATCCTGCAAATTGACATTT[T/C]CCTTCAGGTTCTAGAAGCTG	86
60-85/12C2/86	CGAGAACAGAAGAGAAGAGA[C/]TGGAACACGTCGGACAGTAC	87
62-12C11/N2	ACGGGTCCTAGCGCCATGGC[T]ATTTTCCTCACCGTTTCTGG	88
63-N1/12D10	TTGGGCTTTCGGTGGTATGA[T]CTTCGTCCTCGTCTATTGCA	89
65-85/12F4/86-1	TCCTTGATTCCTTAATAATC[A/T]TTGGCTGGGGGTCTTTCTAA	90
66-12G5/N1	GCTTGAATAACGATGTCTAC[T]CTGCCTCGGCGTACGGCGGA	91
67-85/12G8	CTAAAAAGATCGACGAGTGT[C]CCTTACTACGCTCCATCTAT	92

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68-12G9/N1-1	AGGTGGGTTAGCGTGGCAT[C]CGATCCATTGGATGGATCCA	93
69-85/12G9/	NGTGGGTTTACCGTATCATT[T]GATCCATTGGATGGATCGAG	94
70-12B11/N2-1	GCGGATCCTATATTGGGTCT[T]GATGGATTGTTTCTATCCCG	95
71-/12B11/N2-2	TATCCTGCAAATTGACATTT[C]CCTTCAGGTTCTAGAAGCTG	96
72-N1/12E10	TACCACGGTCGTACTGGTCG[A]TGTCTGGAACGTCACCAAGC	97
73-N1/13A3/N2a	CTGTCTCAgTTTGTTGGATC[C/G]AAATCgAATCGAAAGCGTAC	98
74-N1/13A3/N2b	CTGTCTCAgTTTGTTGGATC[C/G]AAATCaAATCGAAAGCGTAC	99
75-13E8/N2	ACACTGTTGGAGGACGTGAA[G]AAGATATTCAAGACAACATC	100
76-N1/13F6/N2-2	TCTTTCGTATCTTGCTGAGT[C/T]GTTACGCCTGTCAACACCCG	101
77-13F8/N2-1	GGAACCCTAGGGAGCCCACA[G]CTCCTTATGCTAAGCGGGCGT	102
78-13F8/N2	GATCATAGTATCCGCCGGAA[C]CCTAGGGAGCCCACAGCTCC	103
79-85/14B5/86	TTCGGCGGGTCGATCCGGGC[A/G]GAAGACATTGTCAGGTGANN	104
80-N1/14C2/N2	GCACCAACATTGTAAACCTA[T/G]AGCTTCTTCCTCAGCCACCT	105
81-85/14C2/86-1	GCTGCCACATAGTGAACCTA[T/A]AGCTTCTTCCTCAGCCACCT	106
82-N2/14C2/85-2	GCACCAACATTGTGAACCTA[G/A]AGCTTCTTCCTCAGCCACCT	107
83-85/14C2/86-2	AGTACATAGCTATTGACTAA[C/G]TTAAGTTCCTTGTATTGTTG	108
84-N2/14C2/85-1	CCTCTATCCGCCATGGTTGC[A/T]CCAACATTGTGAACCTAGAG	109
85-85/14E2/86-2	TTGACCCCTCGGCAAGCCACC[G/T]GTCAAGCCATGCTGCAGCCT	110
86-85/14E2/86-1	AGGCTGCCCCTCTCCCAATTC[A/C]AAAGCCAACTCCTAAACCAA	111
87-85/14E8/86	AAACATGGAAAGGCCTGATA[/G]TCACCGTCAAGCTCACCGTC	112
88-85/14E12/86	CAACCTGAAAAATTGTTTTA[C/A]CAACGGCCCCGCTTTCTCCA	113

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89-14H10/86	AAGGCCAACAACGACACATTAC[C]TCCATCGTTAGCAACGGAGG	114
90-85/14H10/86	TCACCGGCTTGAAGTCTTCC[G/T]CTGCATTCCCAGTCACCCGC	115
91-85/15A6/86	ACTTCAGCTTTCTTATGCCTC[G/]ACTTGCGACACACGAATCCA	116
92-85/15C4/86	TGCGGCTAACATCTCTGGTG[G/T]TCACCTTAACCCAGCCGTAN	117
93-85/15E5/86-1	CGAGGATCACTTCTCTCTGT[G/T]CAAGAAGAAGTTCGGCAAGG	118
94-N1/15E5/N2-1	CTGTtCAAGAAGAAGTTCGG[C/T]AAGGTCTACGCTTCCCGCGA	119
95-N1/15E5/N2-2	CCCTCTGCTCGTCACGGCGT[T/A]ACGCAGTTCTCGGATCTGAC	120
96-86/15E5/N2	CCCGCGAGGAGCACGACTAC[A/T]GATTCTCCGTTTTCAAATCC	121
97-15E9/86	TCCACTCGCCGGGAAGAAAC[T]CGACAAACCGTTGTCTACTT	122
98-N2/15E9	ATGGCTCGCGACGGGTCTCC[G]GTAAACCTCGGAGAGCAGAT	123
99-N2/15E9/86	GCCGACTCTCGAAGCTTCTT[A/]ACTCCACTCGCCGGGAAGAA	124
100-85/15E9/86-1	GAATCTAGGAGAGCAGATCT[T/G]CCTCTCTATCTTCAATGTTC	125
101-85/15E9/86-2	TCCACTCGCCGGGAAGAAAC[C/T]CGACAAACCGTTGTCTACAT	126
102-N1/15E9/N2-1	GTCATGAAGATATTCACTAC[A/G]CCGACTCTCGAAGCTTCTTA	127
103-85/15F1/86	GCAGGTAAAATTCTACAGAC[C/A]TTCCCTTTTCATTGTAGTTA	128
105-85/15F10/86	GTGCCCTAAAGATACCCTCA[A/G]GCTTGGTGTCTGCGCTAATG	129
106-N2/15G1	TTCTTCCCACAGGTGAAACT[T]GCTAACTTCCTTCCAAAGTA	130
107-N1/15H7/N2	TATGTATCAGGACAATGTGT[GA/TT]GTGACTGTGGTTGCATCCAT	131
108-N1/16A1/N2-1	GCTAAGCTACGCAACTGCCA[C/T]CAATCAGGGCAAGCTAAAGG	132
109-85/16A5/86	TATACACTCTTTAAAAGCGT[G/C]TGTGTGTACCCATCTCTCTT	133

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110-N1/16B6/N2	ATGGCTGCGTATTGGCTGTC[C/T]AAGGCTGGATCTTGGTCCCA	134
111-85/16B6/N1	GGATCCATCTCAACTATGGT[A/C]GTATTATCGTTGAGGCTAGG	135
112-85/16B7/86	GTATGTGATTCGGAAGAGAA[T/]CAAACTAAGTGCCGAGAAAG	136
113-N1/16D6/N2	GCTAAGGTAGTTGGAGGAGC[CAA/GTG]CCACAGCCACGCGACTAAGG	137
114-85/16D10/86	CTCAACGTAGCAAGTAATAA[T/G]ATACTGTCTATTATGGTTA	138
115-N1/16E9/N2	AGACTTTCCCCATTCTCTTC[T/A]CCATCCACCGTCGAAACCCA	139
116-85/16H3/86-1	ACTTCGAAACTGTAAACCTA[A/T]ACTTTAAGAGTTTAGAGCTA	140
117-85/16H3/86-2	CACCATCGGAGAAAGAGGTA[C/T]TTCGAAACTGTAAACCTAAA	141
118-85/17A5/86	CTAAGGCGTCTCCTGAAGAA[A/G]TACAGAGAGTCGAAGAAGAT	142
119-85/17C7/86	CCGCGGACGACGCTTTCTTC[C/A]TCTGCTCCACCGGCGAGCGCC	143
120-85/17F7/86	GAGGAGTAGTCTCCATGGCC[G/]AAGAAGAGCGTCGGAGACCTG	144
121-85/17G12/86	GAAGTTAGGGCTTCTAAGAT[C/T]AAGTTCGGCAAGGCTTTAAC	145
122-85/18A2/86	TCAAAACTAATATTTCTTTT[G/C]TTGATTGGTAATAAACAGGT	146
123-85/18A11/86	TTCCAGTGAAAAGGCATTGT[T/G]CTCCAAAATCTCGCTCTGCG	147
124-85/18F5/86	AAGCAGCTCTGACTTGAATG[C/A]GAGAGGTTAATCAGACTGTG	148
125-85/18H10/86-3	TAGATTGAAGCAATCAAGAA[G/A]ATCTCAGACTTCATCACCCA	149
126-85/19B3/86	GCATCCAACTCCAAGGATGA[/C]CCTGCCAAGGTGTGCTAACT	150
127-85/19C8/86	GAGCTCAGGGATGGTGGATC[A/T]GACTACCTTGGAAAGGGTGT	151
128-N1/19F4/N2	TGGGGTTAGTCGAAATAGGT[A/T]AAATGCTTTGAGTATGTGTA	152
129-N1/19H1/N2	TACGCGCAGCACGGACTTGC[G/A]ACGCAAGCAATCGAGCTTTT	153
130-85/20B4/86-1	GAAGCCCATGGTACGGAGCG[G/A]GAGAGAGTCAAGTACTTGGG	154

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131-N1/20B12/N2	AACGGGTCACTGCTAAATCA[T/A]AAGGATCACAAGGCTGGGAC	155
132-85/20C12/86	CTAGCCTACTTTGGGAAAAG[/T]TTCGTTATTGTTTTGTGTGG	156
133-85/20D2/86	GACTTCAAGGACTTCGCCGG[A/C]AAATGCTCCGACGCTGTCAA	157
134-85/20D3/86-2	GAGGAGGGCTACATGCAGCT[G/A]AAGAGGCTGAGGGGCTAAA	158
135-85/20D6/86-4	GATGTTCAACCTATGAAGAA[G/C]AAACACCGAGGACCAACGAG	159
136-85/20D6/86-5	CCATTAGTGAGGGAGCATGT[T/A]CCTGTCACATTTGATGATTG	160
137-85/20D6/86-8	AAACACATCGCCAAAGATCC[CG/AA]ACACTCGAGAAAGAGTGGAG	161
138-N1/20D8/N2	CTCATAGGCGATCTGGAGTA[T/G]GCAAATCGAATCTCCTCTCC	162
139-N1/20E1/N2	TGCACGCCTCACTTGTTCCT[T/A]CCAATCTGACATCAAGGATT	163
140-N1/20F1/N2-1	NGTGTTTTTGAGGTGAAAGC[A/T]ACAAATGGAGATACCTTTTT	164
141-N1/BoC-a2/N3-2	CCCGAGCCATTAGGACAAGA[T/C]GACTTGCCGTTTGACCAAAC	165
142-N1/BOC-A2/N3-1	CCCATCTCATCCTTCTTGA[A/G]CCGTTGAATCAAGCTCCTGG	166
143-N1/BoC-a2/N3-3	TACATTCTCATTGGTTGGTT[C/A]TTGGGAAATAAAGTACCAAC	167
144-86/SC3	GCACGCGCTAGAGTTGTTGC[C]AGAAGGAATGAACAATCTGA	168
145-N3/SC3/N4-1	CTTGAGACCTATAGTCCTGT[A/T]GTTCGGTCCGCCACAGTTCG	169
146-N3/SC3/N5-1	CACAGTTCGTACAGTTCTTC[A/C]CATTGCCACTGTTATGCACT	170
147-N1/SC3/N3-1	GAAGGGCGTCCCACTATCTTGA[A/G]ACCTATAGTCCTGTTGTTCG	171
148-86/SC3/N4-1	TCCCGGAAATCTTGCTGAAA[A/C]CGTTTACCTGCGACAACCAG	172
149-B11/N5-1	ATGTCTTCAAAGTGCTCTGT[T]GCAACGCACGTCCGAACAAG	173